EXHIBIT C

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Professional Opinion on the Case of Preston Plevretes

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Professional Background and Clinical Training:

Currently, I am an Assistant Professor in the Department of Orthopaedic Surgery and Neurological Surgery at the University of Pittsburgh Medical Center (UPMC). For the past nine years, I have served as Assistant Director of the UPMC Sports Medicine Concussion Program, the largest clinical and research-based concussion program in the United States. Clinically, I see approximately 2000 patients per year in my clinic, from which 80% to 90% are individuals who have sustained sports or recreation related concussions. For each of these patients, my job is to determine if the individual has sustained a cerebral concussion, how severe the injury is, to determine prognosis for recovery, to implement neuropsychological testing and other assessment tools to measure severity and recovery from the injury, to make appropriate management decisions to facilitate recovery from injury including return to physical exertion and academic functioning, to make appropriate recommendations for medication management and rehabilitation following complicated recovery, and to ultimately determine safe return to sport decisions following concussive injury. Currently, I receive referrals from across the country and around the world to help determine these clinical issues.

From a research prospective, I have been the lead or co-author on 56 peer-reviewed publications, 55 of which involve issues pertaining to the subspecialty of sports concussion management. I was the lead author on the first-ever studies examining neuropsychological recovery from concussion in collegiate football players, repetitive effects of cerebral concussion in high school athletes, and the role of equipment in

reducing the incidence and severity of cerebral concussion in football. In 1999, I was the lead author of two major multi-sight studies involving the effects of concussion and return to play evaluation methods. These studies were published in the *Journal of the American Medical Association*. I have also been the lead or co-author of over 50 published abstracts, all of which have focused on the topic of sports-related concussion. I am the co-author of a book entitled *Traumatic Brain Injury in Sports: an International Neuropsychological Perspective*. I have served as a Co-Investigator or as Site Principal Investigator on several research grants totaling over 4 million dollars funded by both the National Institutes of Health and Centers for Disease Control and Prevention. A sampling of the titles of some of these grants include: *The Development and Validation of Measures to Assess Outcomes of Mild Traumatic Brain Injury; Managing Return to Play Decisions Following Mild Traumatic Brain Injury: A Cohort Study; The Comparison of Computerized vs. Traditional Neuropsychological Testing in Developing Objective Criteria for Return to Play Following Concussion; and Functional Magnetic Resonance Imaging in Sports-Related Concussion*. I also serve on the Editorial Board for the *Journal of Athletic Training*, as well as the *Brain Injury Professional*, and am a reviewer for over 10 peer-reviewed journals, including the *Journal of the American Medical Association, American Journal of Sports Medicine, Clinical Journal of Sports Medicine,* and *Neurosurgery*. I have presented at over 200 national and international scientific meetings, all of which have focused on the topic of sports concussion and return to play methods following cerebral concussion. I was also one of the two invited experts and co-lead author for the 2006, Centers for Disease Control and Prevention - *Concussion Tool Kit for Physicians*. This educational compendium was disseminated to all physicians in specific subspecialty areas across the United States. The CDC *Concussion Tool Kit* for Physicians is now considered one of the standards in educating physicians and allied health professionals as to the proper management, assessment, and return to play methods that should be employed when assessing an athlete with cerebral concussion.

In terms of current clinical consulting positions, I am a member of the Pittsburgh Steelers' Medical Staff and also consult with several other National Football League

Teams in helping to determine safe return to play following cerebral concussion. I am or have served as a consultant for Major League Baseball, Major League Baseball Umpires, National Football League-Europe, New Zealand Rugby Football Union, USA Rugby, US Lacrosse, Cirque du Soleil, and several major colleges within the Big-10, Pac-10, ACC, and other major football league conference. For all of these institutions and programs, my role is to serve as a consultant to Athletic Trainers and Sports Medicine practitioners to help make safe return to play decisions following cerebral concussion.

I am also co-developer of ImPACT (Immediate Post Concussion Assessment and Cognitive Testing), a computerized neurocognitive test instrument that has been validated as a tool to assess and measure the effects of cerebral concussion in sports. ImPACT is now mandated for all teams within the National Football League, National Hockey League, Major League Baseball, and is now utilized by over 300 universities and colleges nationally, as well as approximately 3500 high schools across the United States and world.

In conjunction with my clinical responsibilities, I also have responsibility in training and educating allied healthcare professionals on the topic of evaluation and management of sports-related concussion. Practitioners that I directly train on this topic include physicians, athletic trainers, nurse practitioners, residents, fellows, and other healthcare professionals. Additionally, in my clinical practice, I have direct supervision of allied health practitioners, including athletic trainers, nurse practitioners, and physicians and all others involved in the direct clinical care of cerebral concussion. As an extension of these responsibilities, I currently oversee and direct a credentialing program in the proper use of ImPACT, where certification occurs in the proper use of this tool. The credentialing for ImPACT currently includes nurse practitioners, physicians, and clinical neuropsychologists. I am completely familiar with the standard of care as it relates to the proper evaluation and management of cerebral concussion.

In terms of education, I received my Bachelor's Degree in Psychology and Biology from the University of Southern Maine in 1991, my Master's Degree in Psychology at Michigan State University in 1995, and Doctoral Degree in Clinical Psychology with an emphasis in Clinical Neuropsychology at Michigan State in 1998. I subsequently completed a Clinical Neuropsychology internship at the University of Florida/Shands Hospital and a two-year Clinical Neuropsychology Fellowship at the Henry Ford Health System in Detroit before moving to Pittsburgh, and the University of Pittsburgh Medical Center in 2000.

In summary, my areas of professional expertise as evidenced by my clinical, research, and consultation experiences, include the following:

- Clinical assessment and overall clinical management of sports concussion
- The use of neuropsychological testing in the assessment and management of sports concussion
- The effects of repetitive cerebral concussion in the athlete
- The role of physical and cognitive exertion on outcomes associated with cerebral concussion
- Risk factors associated with protracted recovery from cerebral concussion
- Clinical education and dissemination of knowledge to physicians, subspecialists, athletic trainers, other health specialists, coaches, and parents on the topic of sports-related concussion and proper clinical management thereof
- Role of neuroimaging in the assessment of cerebral concussion
- Role of protective equipment in reduction of incidence and severity of sports related concussion

Basic Knowledge of Cerebral Concussion:

The word "concussion" literally translates from Latin to English to mean "to shake violently." Cerebral concussion (i.e. Mild Traumatic Brain Injury or MTBI) is caused when the brain moves inside the skull secondary to rotational or acceleration/deceleration

forces. Over the years, various academic associations have proposed specific definitions of concussion and there has been a recent consensus on key aspects of this injury. Most recently, the Centers for Disease Control and Prevention proposed the following comprehensive definition of concussion:

> *"A mild traumatic brain injury (MTBI) or concussion is defined as a complex pathophysiciological process affecting the brain, induced by traumatic biomechanical forces secondary to indirect or direct forces to the head. MTBI is caused by a jolt to the head or body that disrupts the function of the brain. The disturbance of the brain function is typically associated with normal structural neuroimaging findings (i.e.: CT scan, MRI). MTBI or concussion results in a constellation of physical, cognitive, emotional and or sleep related symptoms that may or may not involve a loss of consciousness (LOC). Duration of symptoms is highly variable and may last from several minutes to days, weeks, months, or longer in some cases." (CDC Physicians Tool Kit, 2007)*

Recent animal model work in rodents has led to insight regarding the pathophysiology of cerebral concussion. Findings from this research indicate concussion is a metabolic brain injury, rather than a structural brain injury, with acute, post-traumatic changes occurring in intracellular and extracellular environments. A brief summary of these mechanisms include ionic shift, abnormal energy metabolism, diminished cerebral blood flow, and impaired neurotransmission. The resulting "metabolic mismatch" that results in the brain between energy demand and energy supply has been postulated to propagate a cellular vulnerability and is particularly susceptible to even minor changes in cerebral blood flow, and increases in intracranial pressure. Such metabolic dysfunction is theoretically linked to "Second Impact Syndrome" and may form the basis for the less severe, although sometimes incapacitating, Post-Concussion Syndrome (prolonged symptoms associated with concussion). What is known from animal and human model research of cerebral concussion is that a certain period of vulnerability exists after the occurrence of cerebral

concussion until there is complete resolution (i.e. completely symptom-free) of this injury and aforementioned metabolic dysfunction.

Primarily, it is known that less biomechanical force can result in more severe, sometimes catastrophic injury when an individual is recovering from an initial concussive event. Moreover, it has been shown through animal model and human model work that increased physical or cognitive exertion during recovery can lead to more protracted and complicated outcomes as well. Consensus has been achieved that appropriate management of the concussed athlete is essential to preventing morbidity in the form of post-concussion syndrome and in the rare occurrence of catastrophic outcome in the form of second impact syndrome. In short, any athlete who continues to exhibit even subtle signs/symptoms of concussive injury, primary including headaches, but also including any neurocognitive difficulties, balance deficits, or any observable sign of dysfunction related to a cerebral concussion should be held out of play until the deficits or symptoms fully resolve. Current standards of care indicate that an athlete must be asymptomatic at rest, asymptomatic with physical/cognitive exertion, and, if available, should also exhibit intact neurocognitive functioning prior to return to sport participation following cerebral concussion.

It is important to note that several recent research findings indicate key predictors of outcome and understanding recovery from sports concussion. First, research by myself and others indicate that up to 90% of cerebral concussions do not involve a loss of consciousness. Research has also indicated that either retrograde or post-traumatic amnesia (loss of memory before trauma/loss of memory subsequent to the trauma), is likely more predictive of poor outcome than compared to those athletes who sustain a brief loss of consciousness (for less than 30 seconds). Recent research findings also indicate the important issue of age and the vulnerability of younger athletes compared to older athletes. For example, research has shown that adolescent athletes require longer recovery time and that younger athletes are more vulnerable to the repetitive effects of cerebral concussion. This may be secondary to the continued development and

mylenization of the brain that occurs until the approximate age of 23-25, or the fact that developing brains are also more glutamate sensitive, a key neurotransmitter involved in the pathophysiology of cerebral concussion. Regardless, it is known that second impact syndrome has only occurred in young collegiate or high school athletes. Second impact syndrome occurs when an athlete who has already sustained a head injury sustains a second head injury before symptoms have cleared from the first injury. The second blow to the head, sometimes minor, can result in a loss of autoregulation of the brain's blood supply, leading to increased intracranial pressure. It is also known that a much more common occurrence of repetitive cerebral concussion, where one injury has not resolved before a second injury occurs, leads to potentially chronic symptoms in the form of post-concussion syndrome. This syndrome can result in an incapacitating constellation of physical, neurocognitive, neurobehavioral, and sleep-related symptoms.

A cornerstone of proper assessment of cerebral concussion involves a thorough assessment and review of symptoms associated with an injury. Research has shown that approximately 20 to 25 symptoms are associated with recovery from cerebral concussion. Research by our group at the University of Pittsburgh Medical Center has shown four classes of symptoms that should be assessed in all cases of concussion, including cognitive symptoms (e.g. fogginess, difficulty concentrating, memory deficits, cognitive fatigue), somatic symptoms (e.g. headaches, nausea, dizziness, light and noise sensitivity, vision changes), sleep difficulties (e.g. difficulty falling asleep, sleep less than usual), and mood symptoms (e.g. increased emotionality, sadness, nervousness, irritability). As different symptoms are associated with different regions of brain dysfunction, it is critical to assess all symptoms in the evaluation of cerebral concussion.

In addition to the assessment of symptoms, the utilization of neuropsychological or neurocognitive testing is the standard for the evaluation of cerebral concussion. As traditional neuroimaging procedures such as CT scans and MRI have been shown to be unremarkable or normal with cerebral concussion, the only known valid quantitative tools to assess cerebral concussion has been shown through recent consensus statements to be

formalized neurocognitive testing and formal balance testing (National Athletic Trainers Association Position Statement: Management of Sport-Related Concussion, 2004; Summary and Agreement Statement of the First International Conference on Concussion in Sport, Vienna 2001). Several specific neurocognitive test batteries have been validated for the purpose of assessing sports-related concussion. Paper and pencil neuropsychological test batteries were the first to be validated in the late 1980s and 1990s, and this was followed by the validation of more efficient, practical, and sensitive computerized test batteries that were validated in the late 1990s and early 2000's time period. It is understood that athletes will frequently minimize or deny symptoms to facilitate return to play following cerebral concussion (National Athletic Trainers Association Position Statement: Management of Sport-Related Concussion, 2004). Our group at the University of Pittsburgh Medical Center has published several studies showing that neurocognitive testing is more sensitive than symptom assessment alone, and the "added value" of computerized neurocognitive testing has been shown to be critical in the safe management of cerebral concussion (Van Kampen, Lovell, Collins et al, *AJSM*, 2008; Fazio, Lovell, Collins et al, *Neurorehabilitation*, 2007). It is well known that athletes may either be unaware that the symptoms they are experiencing are the lingering effects of cerebral concussion, or athletes may simply choose to deny symptoms for fear of losing their spot on the team due to recovery time from injury. As I outlined above in my biography, these are some of the many reasons that computerized neurocognitive testing is now mandated at the levels of the National Football League, National Hockey League, Major League Baseball, and with several professional, collegiate, and amateur levels of sport participation across the country and around the world.

Standards of Care for Managing Sports-Related Concussion:

It is well known and globally accepted that the understanding of sports concussion has evolved rapidly over the past approximate 10-12 years. More has been published on the topic of sports concussion from the year 2000 to the present time than from the years 1900 to 1999 in combination. In short, scientific consensus has been achieved in

understanding cornerstones of care and management of this injury. As of 2005, and at the time of Preston Plevretes' catastrophic brain injury, there were two primary documents that memorialized the standards of care for the physician/healthcare professional and the certified athletic trainer. The "Summary and Agreement Statement of the First International Conference on Concussion and Sport, Vienna 2001" (held in Vienna, Austria), is a document that was published in 2001 simultaneously in the *Clinical Journal of Sports Medicine*, *Physician and Sports Medicine*, and *British Journal of Sports Medicine*. The expert group who compiled the paper, known as the "Concussion in Sport Group," was comprised of a panel of world experts and was organized by the International Ice Hockey Federation, the Federation Internationale de Football Association Medical Assessment and Research Center (i.e. FIFA), and the International Olympic Committee Medical Commission (IOC). The published manuscript from this meeting set forth a revised definition of concussion, a standard concussion management protocol, and discussed the issues of prevention, education, and future directions for the injury. The document was developed for use by "doctors, therapists, health professionals, coaches, and other people involved in the care of injured athletes, whether at the recreational, elite, or professional level." The Concussion in Sport Group has subsequently met in Prague, (2004), for which I was a member of the committee. A more recent document from the same group was formulated in 2008 after a similar expert consensus meeting in Zurich, and was published in the Spring, 2009.

In September, 2004, The National Athletic Trainers' Association ("NATA") published the *National Athletic Trainers' Association Position Statement: Management of Sport-Related Concussion*. This document was widely disseminated to both athletic training and physician groups. This document had specific recommendations pertaining to the definition and recognition of cerebral concussion, evaluation and return to sport decision making, the utilization of appropriate concussion assessment tools, statements pertaining to when an athlete should be referred to a physician or concussion specialist following concussion, when to disqualify an athlete, special considerations for the younger athlete, and equipment/prevention related issues. Both Vienna and the NATA Position Statement

were written secondary to the vast accumulation of published research and evolving understanding of sports-related concussion that occurred between 1999 and the early 2000s. Both of these documents (from this point forward sometimes referred to as the "Vienna and NATA Position Statements") outlined very specific recommendations pertaining to appropriate symptom assessment, role of exertion in recovery from injury, appropriate sideline assessment of injury, the importance of post injury neuropsychological testing prior to return to play following cerebral concussion, the importance of a protocol-driven management approach, the need for a multidisciplinary approach to safe management of injury, and the critical aspect of education surrounding this injury. The Vienna and NATA Position Statements set forth, at the time of Preston Plevretes' October 4, 2005 concussion, the uniformly accepted standard of care in the proper assessment and management of cerebral concussion for all physician, sub-specialty, and allied health professionals, including athletic trainers.

The Case of Preston Plevretes:

In preparation of the current report and my professional opinion on the management of the Preston Plevretes case, I reviewed the following documents provided to me by Michael A. Trunk, Esquire, of the Kline and Specter law firm:

- Medical records received from Preston Plevretes' primary care physician
- Deposition transcript of Andrea Okagawa, CRNP
- Deposition testimony of William Gerzabek, ATC
- Physician transcript of Mark McKenna, M.D.
- Deposition transcript of Phil Longo
- Deposition transcript of Dina Oleksiak, CRNP
- Deposition transcript of William Ross, DO
- Deposition transcript of Jermaine Venable
- Deposition transcript of Phillip Petitte
- Deposition transcript of Tim Miller
- Deposition transcript of Amanda Gasper

- Deposition transcript of Joey Hamm
- Deposition transcript of Timothy Karis
- Deposition transcript of Lawrence Nikola
- Deposition transcript of Lauren McManus
- Deposition transcripts of Ted Plevretes
- Deposition transcripts of Tammy Plevretes
- Plaintiffs' Responses to La Salle's 1st set of requests for admissions
- Plaintiffs' Responses to La Salle's 1st set of interrogatories
- Plaintiffs' Responses to La Salle's 2nd set of supplemental discovery requests
- Plaintiffs' Responses to La Salle's 3rd set of supplemental discovery requests
- Plaintiffs' Responses to La Salle's 4th set of supplemental discovery requests
- Plaintiffs' Responses to La Salle's 5th set of supplemental discovery requests
- Plaintiffs' Responses to La Salle's 6th set of supplemental discovery requests
- Plaintiffs' Supplemental Responses to La Salle's 4th set of supplemental interrogatories
- La Salle's responses to plaintiffs' initial discovery requests
- La Salle's responses to plaintiffs' 1st supplemental discovery requests
- La Salle's responses to plaintiffs' 2nd supplemental discovery requests
- La Salle's responses to plaintiffs' 3rd supplemental discovery requests
- La Salle's responses to plaintiffs' 4th supplemental discovery requests
- La Salle's supplemental answers and objections to plaintiffs' interrogatories
- Color photographs of Preston Plevretes
- Educational materials provided by La Salle University

Professional Statement of Opinion:

Based on my review of the outlined materials, as well as my professional, research, and clinical experience of managing sports-related concussion, the clinicians involved in the care of Preston Plevretes, namely Bill Gerzabek, ATC and Nurse Practitioner Okagawa, CRNP, demonstrated inadequate and substandard care in the management of Preston

Plevretes' cerebral concussion that occurred on October 4, 2005. These practitioners did not exercise the ordinary and reasonable standard care that would be expected by an athletic trainer and nurse practitioner in this matter. The clinical mismanagement of Preston lead to the catastrophic brain injury sustained on November 5, 2005. There was substandard management at all points of contact following his first cerebral concussion until the point of the catastrophic traumatic brain injury approximately one month later.

As I will outline below, there are several areas of failure to provide standard care, including the lack of knowledge/failure to advance care, lack of written protocol regarding the proper management of cerebral concussion, insufficient documentation regarding management of injury, no referral to a physician or specialist directly trained in managing traumatic brain injury, failure to use appropriate and accepted post-injury tools and computerized neurocognitive testing that would have prevented the severe outcome on November 5, 2005, reckless conduct regarding management of the injury, and, finally, the lack of institutional support of La Salle University to help ensure a medically appropriate protocol in managing cerebral concussion. As I outlined above in describing the pathophysiology of cerebral concussion, the patient's premature return to play, associated levels of physical and cognitive exertion, repetitive biomechanical forces to the head, and overall unresolved metabolic crisis related to the cerebral concussion on October 4, 2005 lead to a heightened state of neurological vulnerability and the catastrophic injury sustained on November 5, 2005. Preston's catastrophic brain injury and resultant permanent disability from the November 5, 2005 incident would not have occurred if appropriate and standard care had been delivered in an acceptable manner. I will now review these five critical failures in standard concussion management based upon the records and testimony I have reviewed in Preston Plevretes' case.

- ***Lack of Knowledge/Failure to Advance Care:***

  As outlined by the Concussion in Sport Group, Vienna 2001, as well as the NATA Position Statement in 2004, a significant advancement in knowledge pertaining to the management of sports concussion had occurred in the late 1990s and early 2000s.

Significant research, pertaining to appropriate medical management of sports concussion, had been conducted at all levels of sports participation. After reviewing the depositions of Mr. Gerzabek and Nurse Practitioner Okagawa, it is clear that these practitioners had scant, if any, understanding of the voluminous amounts of research and consensus agreement that had occurred in the field and how this information should have been applied to the appropriate management of Preston's initial injury. This is evidenced by several statements across the testimonies of both Mr. Gerzabek and Nurse Practitioner Okagawa. For example, Mr. Gerzabek openly stated that he felt no need to change practice from 1996 to 2005. In fact, Mr. Gerzabek stated that he was even unaware of both the NATA Position Statement and Vienna Statement at the time of Preston's initial and subsequent injuries in October and November, 2005. Mr. Gerzabek made the statement that the system they employed was "working" and that there had been no reason to change their unwritten protocols.

It should also be noted that the literature provided by Mr. Gerzabek that they reportedly utilized at La Salle University for education/management of sports concussion was outdated, antiquated, and was not representative of the advances evidenced across the field of sports concussion management. The family practice manuscript supplied by Mr. Gerzabek was published well prior to the many advances made within the field and was not referenced in either the NATA or Vienna Position Statements. In fact, no peer-reviewed document provided by Mr. Gerzabek was written beyond the year 2000, which was the time most, if not all, of the advances and our understanding of sports concussion had evolved. The only non peer-reviewed document written subsequent to the year 2000 provided by Mr. Gerzabek was the NCAA Handbook. In fact, that handbook, which was written in June 1994, and was revised in July 2004, stated that it was imperative that healthcare professionals taking care of athletes were able to recognize, evaluate, and treat these injuries in a complete and progressive fashion. This Handbook goes on to report the need for a complete mental status examination and some form of neurocognitive testing to be conducted on the sideline to assess memory function and attention. The Handbook also reports

that several publications had endorsed the use of neurocognitive and neuropsychological testing as a "cornerstone" of appropriate post concussion management. The Handbook further stated that it was essential that the team taking care of athletes rely on advanced clinical skills in evaluating the athlete and that it is essential that no athlete be allowed to return to play when any symptoms, including mild headache exist. Both the Vienna and NATA Position Statements also discuss the need for advanced clinical understanding of this injury to mitigate against deleterious outcomes. Both of these consensus statements emphasize the need for a systematic evaluation of symptoms following cerebral concussion. Both statements also emphasize the need for written symptom checklists in the evaluation of the injury. None of these practices were employed by either Mr. Gerzabek or Nurse Practitioner Okagawa in the clinical management of Preston's October 4th concussion.

The records and testimony of both Mr. Gerzabek and Nurse Practitioner Okagawa show that an appropriate symptom evaluation was not conducted for the patient. In fact, both Mr. Gerzabek and Nurse Practitioner Okagawa exhibited recklessly naïve clinical skills that would not elicit subtle - or even significant – symptoms of the event. At no point did Mr. Gerzabek ask Preston Plevretes critical questions pertaining to the four symptom factors and individual symptoms within those factors, such as fatigue, photosensitivity, phonophobia, specific difficulties with attention/concentration/memory, pressure in the head, feelings of fogginess, blurred vision, vasovagal dizziness, or other symptoms that would indicate incomplete recovery from the October 4, 2005 event.

Mr. Gerzabek and Nurse Practitioner Okagawa's reckless lack of knowledge is readily evidenced in their admission as to how they assessed Preston's symptoms from the October 4th injury. Mr. Gerzabek discussed how he assessed specific domains of the injury, such as how Preston was running around the field appropriately and, thus, did not exhibit balance difficulties. He stated that he assessed potential cognitive difficulty by ascertaining whether Preston exhibited spaces in

between his communicated words. He reported that Preston had no memory difficulties as he could remember plays in team meetings. As noted previously, memory functioning is a key factor in assessing recovery from cerebral concussion and this was never assessed properly in Preston's case. Mr. Gerzabek stated that he "assessed" visual scanning by the impression that Preston was able to catch a football, and equilibrium by assessing Preston could run in a straight line. This reckless lack of sophistication and naïve approach to assessing symptoms elucidates how Preston was able to return to play prematurely and remain symptomatic without appropriate evaluation and assessment. This was further evidenced by Preston's evaluation by Nurse Practitioner Okagawa. Nurse Practitioner Okagawa reported a similar approach in that she assessed equilibrium by watching Preston in the waiting room to be sure he was not "holding himself against a wall." Nurse Practitioner Okagawa failed to systematically evaluate the requisite symptoms of injury in an even remotely sophisticated way. Both the NATA and Vienna Position Statements report the need for a detailed symptom checklist for the safe and comprehensive evaluation in this respect. Both Mr. Gerzabek and Nurse Practitioner Okagawa failed to deliver such care.

Given the reckless approach in assessing Preston's post-injury status, it is not surprising that Mr. Gerzabek and Nurse Practitioner Okagawa failed to appropriately educate their athletes in the basics regarding recognition and potential consequences of repetitive cerebral concussion. It is also noteworthy that Preston's age at the time of the catastrophic injury was 19, which placed him at a particularly vulnerable age to sustain more severe outcome following repetitive head trauma. There was no formal attempt to lecture the athletes regarding these issues, discuss the need to have teammates report symptoms of athletes, or to provide adequate literature that was made available to the football players of La Salle University in educating them about the injury. Instead, according to Mr. Gerzabek, he posted outdated articles in the training room. As stated in the NATA Position Statement, it is equally important for the athlete to understand the signs and symptoms of concussion as well as the

potential negative consequences (e.g. second impact syndrome, and vulnerability to recurrent injury) of not reporting symptoms associated with concussive injury. The NATA Position Statement accurately states that once the athlete has a better understanding of the injury, he or she can provide a more accurate report of the concussion history.

In summary, Mr. Gerzabek and Nurse Practitioner Okagawa did not have the requisite knowledge necessary to appropriately evaluate and treat Preston's October 4th concussion. This lack of knowledge was a critical factor that caused them to fail to recognize Preston's continued symptoms and incomplete recovery from the October 4 event, which lead to the catastrophic outcome evidenced on November 5, 2005. Proper concussion evaluation and management would have shown that Preston had not recovered from the October 4, 2005 concussion, which would have prevented him from returning to play to the November 5, 2005 game.

- ***Failure to Have Written Protocol on Concussion Management/ Lack of Documentation Pertaining to Preston's Management:***

According to the Vienna Statement, a structured and supervised concussion protocol is conducive to optimal recovery and safe and successful return to play following cerebral concussion. Specific criteria in the Vienna statement indicate that the athlete should be completely asymptomatic and have normal neurologic and cognitive evaluations before the start of a rehabilitation program. The Vienna Statement also reports that the more prolonged the symptom duration of the concussed athlete, the longer the athlete should remain out of play following injury and that the athlete will need to proceed with gradual incremental increases in exertion duration and intensity and pause or backtrack with any reoccurrence of concussive symptoms. Based upon the fact that Mr. Gerzabek and Nurse Practitioner Okagawa never appropriately assessed Preston's symptoms, it is impossible that Preston was appropriately put through a step wise protocol prior to return to play. The fact that no objective or systematic evaluation of Preston ever took place, let alone formal neurocognitive

testing, indicates that these practitioners had no organized approach at assuring a safe return to competition in Preston's case.

The NATA Position Statement also reports the need for specific protocols and a "team approach" to the assessment of concussion. This document outlines that the ATC and team physician should agree on a philosophy for managing sports-related concussion before the start of the athletic season. Further, this manuscript states that all pertinent information surrounding any concussive injury should be explicitly documented in writing, including mechanism of injury, initial signs and symptoms, state of consciousness, findings on serial testing of symptoms, neuropsychological function, and postural stability tests. The NATA Position Statement further instructs the athletic trainer to give instructions to the athlete and/or parents regarding management of injury, written recommendations provided to physician, and relevant history on the player's history of prior concussion and associated recovery patterns. Mr. Gerzabek and Nurse Practitioner Okagawa failed in every respect of these consensus recommendations and no such documentation exists in Preston's post-injury management. It should be noted Mr. Gerzabek made copious notes in regards to Preston's hand injury, though scant information existed pertaining to Preston's concussion management.

Both the NATA and Vienna Position Statements also report the essential need for serial evaluation during the recovery process from cerebral concussion. In fact, there are no notes on Preston's care from October 12th until Preston was reportedly cleared on October 16th. There are no notes on whether Preston experienced symptoms with his progression to exertion and there is no documentation to support that symptoms were assessed following his documented clearance on October 16, 2005. [1]

[1] While Mr. Gerzabek testified that he conducted some on the field evaluation drills on the field with Preston Plevretes from on October 13, 14, and 17, there is no documentation of any drills for those dates, and Mr. Gerzabek testified that he has no specific memory of being on the field with Preston Plevretes conducting drills. On questioning, Mr. Gerzabek admitted that he is merely saying what he would have done based on what he would usually have done.

Mr. Gerzabek stated in his deposition that a written protocol for managing concussion "would have been optimal." Nurse Practitioner Okagawa stated that how they managed the injury was "how it had been done for many years." She also reported that there was no written protocol for management and care of the concussed athletes at La Salle University. There was no provided documentation that outlined specific policies and procedures following head injury or the post injury management of these athletes. The system, which had admittedly been incorporated with no change since 1996, was grossly substandard and did not incorporate any of the critical advances and understanding regarding concussion management that had occurred. At the time of Preston's injury in 2005, there was consensus from the NATA and Vienna Position Statements that basic tenets and principles existed for an acceptable concussion management program. These basic tenets included a collaboration between athletic trainers, team physicians, and specialists in collectively managing the athlete, an understanding of the athlete's concussion history prior to evaluation of concussion, the use of a post-injury symptom checklist in systematically evaluating the athlete's status, the utilization of baseline and post-injury neurocognitive testing protocols, having a systematic and graded return to exertion following injury, systematic reevaluation of symptoms following each exertional stage, and a collective understanding that the patient is completely asymptomatic at rest, asymptomatic with exertion, and demonstrates intact neurocognitive performance prior to final clearance. That protocol was the standard for concussion management in October, 2005. Across all aspects of this standard protocol, it is clear that Mr. Gerzabek, Nurse Practitioner Okagawa, and La Salle University failed to deliver appropriate and standard care, which ultimately led to Preston's catastrophic injury on November 5, 2005.

- ***No Referral to Physician/Specialist:***

According to both the NATA and Vienna Position Statements, a team approach to the assessment of concussion should be taken and should include a variety of medical specialists. These consensus documents state that in addition to a family practice or general medicine physician, the athletic trainer should secure other specialist referral

sources within the community. The NATA Position Statement states that results from a thorough clinical examination conducted by both the athletic trainer and physician cannot be overlooked in the safe management of concussion and should be considered very important pieces of the concussion puzzle. Moreover, it is outlined that the ATC/physician team should also consider referral options to specialists such as neurologists, neurosurgeons, neuropsychologists, and neurootologists depending on the injury's severity and situation. The NATA Position Statement also indicates that serial follow-up assessment and physician follow-up are critical components of an appropriate concussion evaluation. Moreover, referral should be made to medical personnel who are experienced in managing sports concussion.

At La Salle University, and at the time of Preston's injury in 2005, Mr. Gerzabek and Nurse Practitioner Okagawa both reported that there was no specific team physician working with the football team. No attempt was made by Mr. Gerzabek or Nurse Practitioner Okagawa to refer Preston to a physician, let alone a specialist who was appropriately trained to assess traumatic brain injury. Moreover, the NCAA Handbook states that clearance is solely the responsibility of the team physician, no such clearance had occurred in Preston's case. As is well documented, Preston was taken by his family to a medical center, Centra State, on October 11, 2005, and that was the only reason Preston underwent any medical evaluation and received a CT scan of the brain.

The necessity of physician involvement in the management of a concussed athlete is universally agreed upon as being an important component of safe return to play following cerebral concussion. All consensus statements at that point in time would uniformly agree with this point, and such failure for referral is grossly negligent in the management of Preston's case. Any physician operating within the standard of care, whether it had been an orthopedist affiliated with the program, Dr. McKenna, Dr. Lalor, or other available physicians, would have provided another check-point in the assessment of Preston's symptoms, including a physical evaluation and formal

balance assessment that likely would have uncovered the lingering symptoms of Preston's October 4, 2005 injury, and would have appropriately delayed his return to play. Moreover, it was also reported by Mr. Gerzabek that La Salle University had access to Dr. Mary Pelham, a neuropsychologist at Drucker Institute. Dr. Pelham is a Clinical Neuropsychologist who was Fellowship trained under my direct supervision at the UPMC Sports Concussion Program as a sports concussion specialist. Referral to Dr. Pelham would have assured an appropriate and detailed symptom evaluation, and, most importantly, Preston would have received a neurocognitive evaluation, which would have revealed lingering signs and symptoms of the unresolved concussion and appropriately delayed his return to play. Mr. Gerzabek and Nurse Practitioner Okagawa also testified that they did not have an appropriate referral to a neurologist in this respect. There was complete failure on behalf of Mr. Gerzabek and Nurse Practitioner Okagawa to perform a standard referral in this respect. Standards at the time of 2005 were very clear on the need for direct physician and/or specialist involvement following concussion and in making appropriate and safe return to play decisions. This is another area of failure by Mr. Gerzabek or Nurse Practitioner Okagawa in delivering appropriate care in Preston's case.

- ***No Formal Baseline and/or Post-Injury Neurocognitive Testing:***

Both the NATA and Vienna Position Statements set forth the need for neurocognitive (i.e. neuropsychological) testing in the appropriate management of sports-related concussion. In fact, the Vienna Statement indicated that neuropsychological testing was one of the "cornerstones" of appropriate concussion management and contributes significantly to both understanding the injury and management of the individual. The NATA Position Statement recommends baseline cognitive and postural stability testing in the management of sports related concussion. Research at the time of Preston's 2005 injury clearly indicated the validity, sensitivity, and added value of such testing in the safe management of cerebral concussion. At that point in time, the great majority of Universities/Colleges in Pennsylvania were employing baseline and post-injury neuropsychological testing in managing their concussed athletes.

Neuropsychological testing is especially critical in athletes who might have a proclivity to minimize symptoms. Mr. Gerzabek admitted in his deposition that Preston minimized symptoms associated with his hand injury, and that he felt this was likely occurring with his head trauma. Given the testimony of Preston's girlfriend, teammates, and family, all of whom report that Preston was experiencing consistent, repeated headaches following the October 4th incident and leading up to the catastrophic event on November 5, 2005, it is clear Preston was not fully recovered from the first concussive episode. Formal neurocognitive testing, with or without a baseline available, would have uncovered deficits that would have alerted a trained clinician that recovery had not occurred from the first incident, and would have led to prudent management of his case. That, in turn, would have lead to Preston Plevretes to being sidelined and not playing in the November 5, 2005 game against Duquesne University. Again, at all levels of the expected care and assessment of a concussed athlete, La Salle University failed to provide appropriate care. The University had full opportunity and ability to incorporate baseline/post-injury computerized neurocognitive testing or refer directly to Dr. Mary Pelham or other neuropsychologist to complete this critical evaluation. Also, Mr. Gerzabek could have simply utilized a standard checklist of symptoms, and both Nurse Practitioner Okagawa and Mr. Gerzabek could have conducted an appropriate clinical interview rather than the naïve and reckless assumption that deficits or signs of injury would be evidenced by Preston's behavior, speech, language, remembering play calls and team meetings, ability to catch the ball, etc. Preston's symptoms from the October 4th incident were never elucidated because the practitioners caring for Preston were grossly incompetent to manage concussion and did not use the required, appropriate, and available tools that would have uncovered his deficits and symptoms.

Not only did Mr. Grezabek and Nurse Practitioner Okagawa fail to utilize advances in the form of neuropsychological testing, Nurse Practitioner Okagawa also improperly used the SAC Test in her evaluation of Preston in her office on October 10 and

October 12, 2005. As noted in the NATA Position Statement, the SAC is an objective tool for assessing the injured athlete's mental status during the acute period after concussion mainly on the sideline and within the first 24 to 48 hours post injury. The SAC is not a tool comprehensive enough to evaluate the athlete's cognitive status following that time period. The Vienna Statement indicates that the SAC is not meant to replace comprehensive neuropsychological testing, which is sensitive enough to detect subtle deficits that may exist beyond the acute episode of concussion. The fact that Nurse Practitioner Okagawa administered the SAC six and eight days following Preston's injury further reinforces her reckless lack of training and competence in properly evaluating Preston's injury. To further reinforce this point, Nurse Practitioner Okagawa was not trained in how to administer the SAC and, as a result, administered the test in a completely invalid fashion. Nurse Practitioner Okagawa failed to properly administer the orientation questions of the SAC, administered only one (rather than three) trials of the memory section of the SAC, and improperly scored Preston's SAC test on both occasions. This invalidates findings from that measure, even if it were appropriately administered in the first place (which it was not). Nurse Practitioner Okagawa was also unfamiliar with computerized neurocognitive testing at the time of Preston's injury, which speaks for a dangerous lack of training in evaluating the injury. Even so, in her testimony, Nurse Practitioner Okagawa states that "in a perfect world, we would have everyone do neuropsychological testing."

- ***Reckless Conduct:***

Several examples exist of the inadequate, uninformed, and reckless care that Preston received at La Salle University following his cerebral concussion on October 4, 2005. In reading through the depositions of Amanda Gasper, Joey Hamm, Timothy Karis, Lawrence Nikola, Lauren McManus, Ted Plevretes, and Tammy Plevretes, it is clear that everyone knew of Preston's headaches other than those responsible for evaluating and managing him. Knowing Preston's proclivity for minimizing symptoms, and the fact that he was not utilizing any objective tool to evaluate

Preston's recovery, it would be reasonably expected that Mr. Gerzabek would have asked specific questions to Preston's teammates, friends, or parents, as to whether there were any lingering symptoms present prior to returning him to play on October 16th, and even more critically, after he had returned to play to serially evaluate his status.

Further examples of reckless care and management can be found throughout the testimony of Nurse Practitioner Okagawa and Mr. Gerzabek. For example, Mr. Gerzabek testified that he was unaware that Preston had sustained a head injury in 2000 and a concussion in 2003. Nurse Practitioner Okagawa testified that she did not even have the record listing Preston's prior head injury and concussion at the time she was evaluating the October 4, 2005 concussion. Both the Vienna and NATA Position Statements report the need for an accurate assessment of concussion history in determining safe return to play. Additionally, neither Nurse Practitioner Okagawa nor Mr. Gerzabek asked Preston if he was taking a pain reliever (Advil or Tylenol) during their evaluations of him until his clearance. Indeed, on October 12, 2005, the day Nurse Practitioner Okagawa declared Preston "asymptomatic", Preston reported to her that the Advil she had recommended he take was providing headache relief, but she did not ask if he had taken one that day. And Mr. Gerzabek testified that he did not ask Preston if he was taking Tylenol or Advil during his reported on the field assessment of Preston on October 13, 14, and 17. This is inexplicable and reckless. Moreover, the fact that Preston actually requested air in his helmet the day of the catastrophic brain injury on November 5 and Mr Gerzabek did not inquire as to whether this was related to lingering effects of his October 4th concussion is reckless. There were no notes to Preston's teachers following the cerebral concussion by Nurse Practitioner Okagawa, which is standard practice to allow appropriate cognitive rest and academic support during recovery from cerebral concussion. Nurse Practitioner Okagawa's statement that she certainly did not do "deep research" on the issue of concussion is a self-admission that she was unprepared and untrained in appropriate management of the injury. The fact that there were no notes or documentation of

Preston's management following October 12, 2005 is reckless. Perhaps the most disconcerting testimony was the grossly naïve understanding by both Mr. Gerzabek and Nurse Practitioner Okagawa that concussion can and should be assessed by watching someone in a waiting room, how they speak in conversation, whether they are "confused" at team meetings, watching how one runs across the field to adequately assess balance, and the overall lack of a systematic and informed symptom evaluation. Lastly, the fact that Mr. Gerzabek stated that Preston "did not feel right" but was asymptomatic leads to the lack of understanding and failure to appreciate subtleties of the injury in any way, shape, or form. In summary, these examples are a few of the many examples of the inadequate and reckless care that Preston received following his cerebral concussion on October 4, 2005 and leading to his catastrophic injury on November 5, 2005. These failings are especially egregious in light of the fact that the testimony of Mr. Gerzabek and Nurse Practitioner Okagawa shows that they were aware that returning a concussive athlete to play prematurely can lead to a second and more serious injury.

- ***Lack of Institutional Support:***

In reviewing the testimony of Mr. Gerzabek, it is clear that he felt overwhelmed given his myriad job responsibilities of overseeing the care of approximately 75 football players and also being responsible for the Athletic Training program at La Salle. This was further confounded by the fact Mr. Gerzabek fired one of his employees in early October, 2005, and did not rehire another ATC until late October, 2005, which was during the time of Preston's inadequate assessments and evaluations. Mr. Gerzabek reported his "preference" to have more staff on board and had placed requests to the University in this respect. Thus, not only was Mr. Gerzabek uneducated and misinformed as to how to properly evaluate cerebral concussion, he was overwhelmed due to his duties and responsibilities of his job. This, in turn, led to short shrift and inattention to Preston's protracted symptoms of concussion and premature return to play. Moreover, there was no team physician involved in Preston's evaluation and return to play management, leaving Mr. Gerzabek and Nurse

Practitioner Okagawa as the only people overseeing Preston's care. The lack of institutional involvement in assuring appropriate care for their student athletes and also not having any written protocols for appropriate management of injury is a reckless and gross deviation from the standard of care. As such, the lack of institutional support was also responsible for Preston's mismanagement and catastrophic outcome.

Summary Opinion on Case of Preston Plevretes

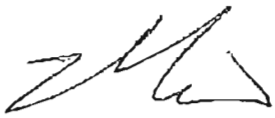
In summary, La Salle University, Mr. Gerzabek, and Nurse Practitioner Okagawa, did not reach the level of competence needed to conduct a safe evaluation following Preston's initial cerebral concussion on October 4, 2005. All points of contact that the University provided were short of the care that would be expected to adequately prevent the catastrophic outcome that was evidenced in Preston's case. The most notable flaws in evaluation occurred in the brevity and naïve objective assessment of Preston's symptoms, lack of objective evaluation in the form of neurocognitive testing and symptom check list evaluation, the admitted knowledge that Preston had a proclivity for minimizing injury, the fact that no physician or specialist was directly involved in Preston's care, the lack of serial documentation and evaluation of Preston in the exertional protocol, the failure to communicate with Preston's family members, friends, and teammates when he was readily reporting symptoms to all those individuals, and the dangerously uninformed and untrained care provided by both Nurse Practitioner Okagawa and Mr. Gerzabek. Even though Mr. Gerzabek and Nurse Practitioner Okagawa state that "the system was working," it was a matter of time before a catastrophic outcome from head injury occurred. From a review of the records and testimony in this case, it is clear that Nurse Practitioner Okagawa and Mr. Gerzabek were not knowledgeable enough to understand the errors that were made in Preston's care.

When one examines the standards of care set forth in the Vienna and NATA Position Statements, it is clear that Preston did not receive the ordinary and reasonable standard care that was expected for a collegiate football player who sustained a cerebral

concussion. There is a level of accountability that must occur in a collegiate setting for the management of a concussed athlete. La Salle University and its practitioners failed to meet that level and were unprepared, uninformed, and uneducated to prevent the poor outcome that ensued in Preston's case. Preston's catastrophic brain injury and resultant permanent disability from the November 5, 2005 incident would not have occurred if appropriate and standard care had occurred with his cerebral concussion sustained on October 4, 2005. Prematurely returning Preston Plevretes to play before resolution of his prior concussion increased the risk that Preston would suffer a catastrophic brain injury. Had La Salle and its practitioners followed the standard of care, Preston would have been sidelined and never permitted to play in the November 5, 2005 game against Duquesne.

As a clinician and researcher who has devoted the past 10 years to the study of clinical management of sports concussion, I find the evaluation procedures that were in place at La Salle University to have been grossly inadequate, negligent, reckless, and substandard across all phases of Preston's evaluation and treatment. Preston's catastrophic outcome would have been prevented if he received appropriate and standard care.

All of my above opinions are held to a reasonable degree of certainty. I reserve the right to supplement this report as additional information becomes available.



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